

REMARKS

This reply is responsive to the Office Action dated July 7, 2008 ("Office Action"). Claims 40-64 are pending. Claims 40-57 are withdrawn from consideration, and claims 58-64 are rejected. Claims 58-64 are amended, and new claims 65 and 66 are presented herein. Support for the new claims and amendments can be found in the original claims and throughout the specification as filed. Accordingly, it is respectfully submitted that no new matter is presented.

Objection to the Abstract

The Office Action objects to the Abstract as not appearing on a separate sheet. *See* Office Action at 3. Applicants submit herewith a new abstract on a separate sheet in accordance with 37 C.F.R. § 1.52(b)(4).

Restriction Requirement

Restriction is required between Group I, which according to the Office Action is drawn to a process for coating a metal surface, and Group II, which according to the Office Action is drawn to a process for the application of a film-forming composition to a metal surface. *See* Office Action at 2. **Applicants confirm the election of Group II (claims 58-64)** made by counsel for Applicants telephonically on June 27, 2008. Applicants also respectfully submit that new claim 65 should be considered with the elected claims.

Rejection under 35 U.S.C. § 112, second paragraph

Claims 61 and 62 are rejected under 35 U.S.C. § 112, ¶ 2 as being indefinite. *See* Office Action at 2. Claim 61 has been amended to remove the recitation of "at least one polymer"

following “polyurethane,” and Applicants respectfully request withdrawal of this ground of rejection.

Rejections under 35 U.S.C. § 103(a)

Claims 58-64 (Vogt in view of Simpson and Maeda in further view of Berge)

The present invention is generally directed to the use of block copolymers bearing phosphate and/or phosphonate groups as, for example, adhesion promoters or protecting agents.

Claims 58-64 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Pat. No. 6,191,056 to Vogt, *et. al* (“Vogt”), in view of U.S. Pat. No. 6,287,706 to Simpson, *et. al* (“Simpson”) and U.S. Pat. No. 6,146,806 to Maeda, *et. al* (“Maeda”), further in view of EP 1,156,089 to Berge, *et. al* (“Berge”). See Office Action at 4.

According to the Office Action, Vogt discloses “a process for application to a metal coated fabric of a primer coating and then of a polyurethane coating...” See Office Action at 4. The Office Action admits, however, that Vogt fails to teach a primer that is a block copolymer. See Office Action at 4. The Office Action cites Simpson and Maeda to cure this deficiency, alleging that they teach that “a random copolymer is functionally equivalent to a block copolymer” and that therefore it would have been obvious to use a block copolymer comprising “the same monomer units as in a random copolymer.” See Office Action at 4-5. Moreover, according to the Office Action, Berge teaches that phosphated block copolymers are suitable for bonding to aluminum surfaces. See Office Action at 5. According to the Office Action, “it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used phosphated block copolymer in a primer of Vogt et al instead of phosphated random copolymer with the exception of providing the desired strong adhesion of the primer to the metal coated fabric since Berge et al teaches that phosphated block copolymer is suitable for reducing

generation of hydrogen gas from aluminum flakes in water.” Office Action at 5. Applicants respectfully traverse.

Claim 58 recites in relevant part “...applying a formulation comprising a block copolymer and a solvent to the surface to form a deposited layer comprising a continuous coat...” (emphasis added). Vogt, in contrast, teaches a primer coating for providing metallized fabric with improved washfastness by applying a primer composition onto “*discrete* metal particles...” See Vogt at col. 2, lines 37-40 (emphasis added). Applicants respectfully submit that Vogt alone or Vogt in view of Simpson, Maeda, and/or Berge, fails to teach or suggest the recited “deposited layer comprising a continuous coat.” Indeed, provision of a continuous coat represents a completely different physical application to discrete particles because a continuous coat might not function under such circumstances. For this reason, such application would be inconsistent with the goal of washfastness of a fabric as set forth by Vogt.

Nor would it have been obvious to one of ordinary skill in the art to form a deposited layer comprising a continuous coat, as none of the references teach a surface upon which forming a deposited layer comprising a continuous coat would be possible or advantageous. Accordingly, because none of the references cited by the Office Action alone or in combination teaches the present invention, Applicants respectfully submit that a *prima facie* case of obviousness is not established, and this rejection should be withdrawn.

Furthermore, as noted above, the Office Action admits that Vogt does not teach block copolymers, and seeks to remedy this deficiency with the teachings of Simpson and Maeda. See Office Action at 4. However, Applicants respectfully submit that Simpson and Maeda do not teach that a random copolymer is functionally equivalent to a block copolymer for use in adhesion promoters and/or protective agents such as in the present invention. There is also no

reason or suggestion provided in these references regarding the effectiveness of block copolymers as coatings on particles to improve washfastness (which is why one of ordinary skill in the art would carry out the combination in the first place.)

Simpson teaches sheet materials for floor coverings. The Office Action cites Simpson's statement that "[t]he polyalkene or polyolefin resins used in accordance with the present invention may be of various different types including random bipolymers and terpolymers, and block copolymers, based on a variety of monomer units..." See Office Action at 4 and Simpson at col. 9, line 66 -col. 10, line 22.

Maeda teaches photoresist compositions for lithography. The Office Action cites Maeda's statement that "the polymer is not limited to only the case where each unit in the above formula forms a predetermined arrangement and may also be, for example, a random or block copolymer of these monomer units." See Office Action at 4 and Maeda at col. 8, lines 55-58.

Applicants respectfully submit that the teachings of Simpson and Maeda are limited to the subject matter of the respective references and are not teachings that random copolymers are always functionally equivalent to block copolymers in all applications, and particularly in the metallized fabric technology disclosed by Vogt, or in the technology of the present invention. One of ordinary skill in the art would not have had reason to combine the teachings of Simpson and Maeda with the teachings of Vogt because all three references relate to technologies that are both disparate from one another and different from technology of the present application. In addition, Applicants respectfully submit that one of ordinary skill in the art would not have expected success in substituting the random polymers of Vogt with the block copolymers of Simpson and Maeda because the references do not provide any suggestion or reason for the functional equivalence of block and random copolymers for Applicants' intended purpose. In

sum, a teaching of a polymer coating for floors or photoresists hardly provides reason to employ such coating onto a fabric for washfastness. As the Federal Circuit recently enunciated, post KSR, “We must still be careful not to allow hindsight reconstruction of references to reach the claimed invention without any explanation as to how or why the references would be combined to produce the claimed invention.” *Innogenics N.V. v. Abbot Labs.*, 85 U.S.P.Q.2d 1641 (Fed. Cir. 2008).

Finally, Applicants respectfully submit that a *prima facie* case of obviousness has not been established because Berge does not provide a reason for modifying the process of Vogt to arrive at the present invention. The Office Action cites Berge for its “teach[ing] that [a] phosphated block copolymer is suitable for bonding to [an] aluminum surface.” *See* Office Action at 5. Berge, however, is directed to “provid[ing] for an aqueous metallic flake containing coating composition having improved glamour...” *See* Berge Abstract. Berge also states:

It is well known to use metallic flakes in coating compositions for imparting metallic glamour, particularly in exterior finishes applied on automobile and truck bodies. Though there are relatively few problems associated with the use of these metallic flakes in solvent based coating compositions, **when utilized in waterborne coating compositions, the metallic flake, particularly aluminum flake, reacts with water and any acid constituents present in such coating compositions. As a result, the flake deteriorates and produces hydrogen gas,** which is a potential safety hazard. Furthermore, finishes resulting from such coating compositions have a reduced brightness and glamour.

See Berge at paragraph 2. (emphasis added).

Berge, therefore, addresses the problem of hydrogen gas evolution from the introduction of metallic flakes into water based solvents. Applicants respectfully submit that Berge does not address the problem of coating metal surfaces to improve their adhesion and/or corrosion

resistance characteristics, and the teachings of Berge are inapposite, as hydrogen gas evolution is not a demonstrated problem in known in the art of coating metal surfaces.

For at least these reasons, Applicants respectfully request withdrawal of the rejection of claims 58-64 as obvious over Vogt in view of Simpson and Maeda, in further view of Berge.

Claim 60 (Vogt in view of Simpson and Maeda in further view of Berge in further view of Chen)

Claim 60 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Vogt in view of Simpson and Maeda in further view of Berge in further view of Chen (U.S. Patent No. 5,306,764) ("Chen"). According to the Office Action, Chen teaches that water dispersible polyurethane resins can be used to replace the conventional, organic solvent based polyurethane resins in industrial applications such as coating fabrics. *See* Office Action at 7. The Office Action states that "it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used conventional organic solvent based polyurethane resins since it is well known in the art that organic solvent based PU compositions are conventionally used in the art coating fabrics as taught by Chen." Office Action at 7.

Applicants respectfully request withdrawal of this rejection for at least the reasons set forth above with regard to the rejection of claims 58-64 as obvious over Vogt in view of Simpson and Maeda in further view of Berge.

CONCLUSION

An indication of allowance of all claims is respectfully solicited. In the event any issues remain, Applicants would appreciate the courtesy of a telephone call to their counsel to resolve such issues and place all claims in condition for allowance.

Respectfully submitted,

Hunton & Williams, L.L.P.

Dated: January 7, 2009

By: 

Robert M. Schulman
Registration No. 31,196

Dwight M. Benner II
Registration No. 52,467

Hunton & Williams LLP
Intellectual Property Department
1900 K Street, N.W. Suite 1200
Washington, D.C. 20006
(202) 955-1500 (telephone)
(202) 778-2201 (facsimile)